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VI. ABSTRACT

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A machine, method for making the machine, method for using the machine, article of manufacture, and products produced by the method using a digital electrical computer in convex futures contract clearing, the method including the steps of: providing a clearing computer system including a digital electrical computer having a processor electrically connected to an input device for receiving input information and producing input electrical signals representing the input information, to an output device for producing a display corresponding to output electrical signals, and to a printer device for printing corresponding to the output electrical signals; and programming the processor to form circuitry in the processor to control the computer system in signal processing responsive to the input electrical signals to produce other electrical signals including the output electrical signals, in data processing substeps of: receiving, as a portion of the input information, a base tick value for a convex futures contract, an expiration time for the convex futures contract, identification of a buyer of the convex futures contract, identification of a seller of the convex futures contract, a trade price for the convex futures contract, and a settlement price for the convex futures contract; computing a discount factor from the settlement price; determining an actual tick value by applying the discount factor to the base tick value; specifying an amount of money a clearing entity must transfer between the buyer and the seller for clearing the convex futures contract by applying the actual tick value to a difference between the trade price data and the settlement price; triggering a computer-assisted transfer of the amount of money; and generating, at the printing device, documentation including the computed amount of money transferred, in clearing the trade of the convex futures contract.